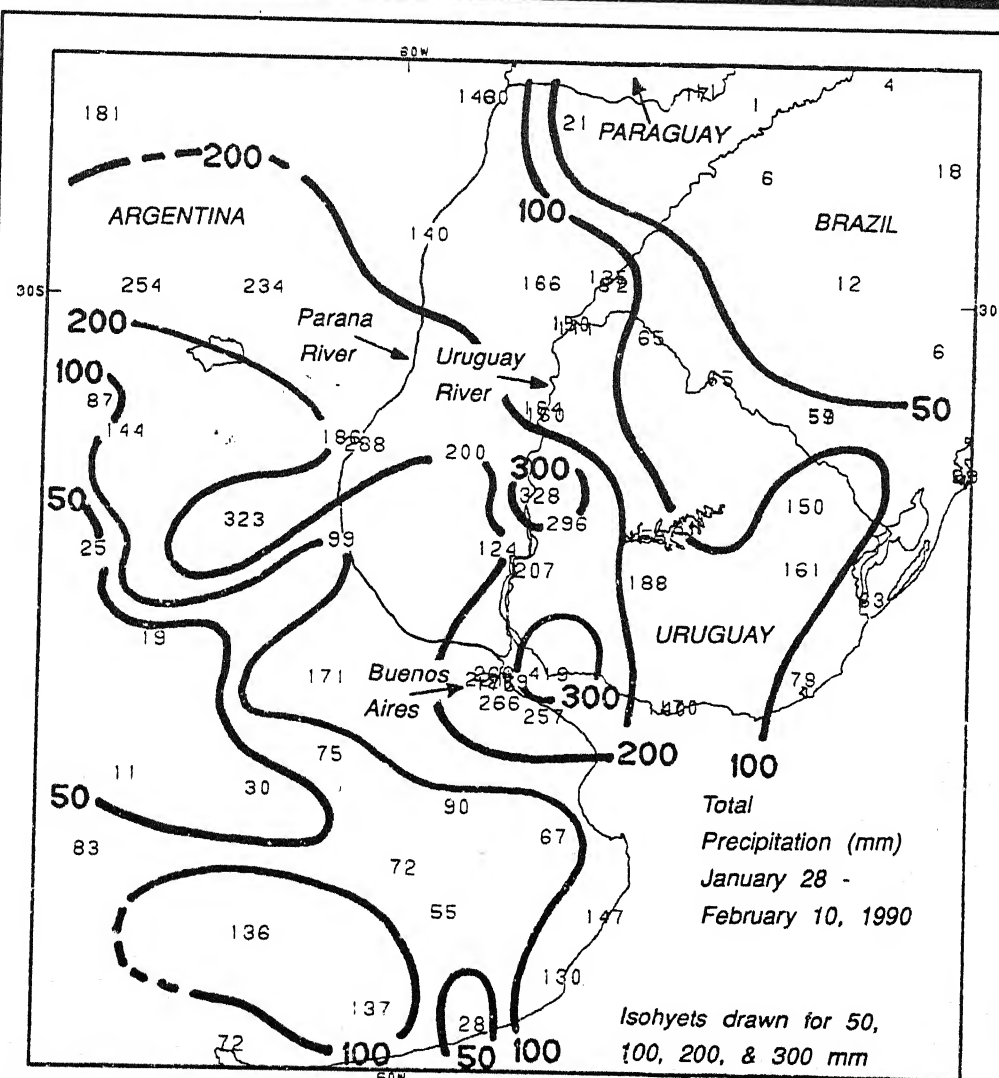


WEEKLY CLIMATE BULLETIN

No. 90/06

Washington, DC

February 10, 1990



HEAVY SHOWERS AND THUNDERSTORMS DELUGED PORTIONS OF NORTHERN ARGENTINA AND WESTERN URUGUAY DURING THE PAST TWO WEEKS WITH UP TO 419 MM OF RAIN. ACCORDING TO PRESS REPORTS, SEVERE FLOODING OCCURRED ALONG THE PARANA AND URUGUAY RIVERS AND IN THE OUTSKIRTS OF BUENOS AIRES. DURING THE LATTER HALF OF JANUARY, TORRENTIAL RAINS SOAKED NORTH-EASTERN ARGENTINA, SOUTHERN PARAGUAY, AND SOUTHERN BRAZIL. IN SHARP CONTRAST, SEVERE DROUGHT AFFLICTED MUCH OF THE AREA APPROXIMATELY ONE YEAR AGO.

UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE-NATIONAL METEOROLOGICAL CENTER
CLIMATE ANALYSIS CENTER

WEEKLY CLIMATE BULLETIN

This Bulletin is issued weekly by the Climate Analysis Center and is designed to indicate, in a brief concise format, current surface climatic conditions in the United States and around the world. The Bulletin contains:

- *Highlights of major climatic events and anomalies.*
- *U.S. climatic conditions for the previous week.*
- *U.S. apparent temperatures (summer) or wind chill (winter).*
- *U.S. cooling degree days (summer) or heating degree days (winter).*
- *Global two-week temperature anomalies.*
- *Global four-week precipitation anomalies.*
- *Global monthly temperature and precipitation anomalies.*
- *Global three-month precipitation anomalies (once a month).*
- *Global twelve-month precipitation anomalies (every three months).*
- *Global three-month temperature anomalies for winter and summer seasons.*
- *Special climate summaries, explanations, etc. (as appropriate).*

Most analyses contained in this Bulletin are based on preliminary, unchecked data received at the Climate Analysis Center via the Global Telecommunications System. Similar analyses based on final, checked data are likely to differ to some extent from those presented here.

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GLOBAL CLIMATE HIGHLIGHTS

MAJOR CLIMATIC EVENTS AND ANOMALIES AS OF FEBRUARY 10, 1990

1. Eastern United States:

MILD WEATHER ABOUNDS.

Temperatures 3°C to 10°C above normal dominated the region's weather. Portions of the Northeast, however, received nearly 35 cm of snow during a fleeting Arctic outbreak. Much of the southern half of the region recorded extreme temperatures above 21°C as more than two dozen daily record highs were set during the week [6 weeks].

2. Southern U.S.:

MORE HEAVY RAIN AND SEVERE WEATHER.

A potent outbreak of severe weather late in the week spawned nearly two dozen tornadoes and numerous reports of hail and high winds from eastern Texas to the Virginia Tidewater. In addition, heavy rainfall again inundated much of the region as portions of northern Florida, northern Georgia, and southeastern Louisiana reported nearly 135 mm [4 weeks].

3. Western United States and Southwestern Canada:

CONTINUED LIGHT PRECIPITATION EASES DRYNESS.

Between 5 and 20 mm of precipitation dampened southern portions of the region while parts of northern California reported more than 35 mm. The persistent light precipitation has somewhat reduced short-term moisture deficits and slightly eased long-term dryness which has plagued the region for a few years [Ended after 11 weeks].

4. Northwestern U.S. and Southwestern Canada:

SEVERAL WEEKS OF STORMS TURNS REGION ANOMALOUSLY WET.

Western portions of Washington and Oregon and southwestern British Columbia, battling a serious moisture deficit at the end of 1989, have since been inundated by as much as 1400 mm of precipitation. The barrage continued last week as most areas received another 125 mm to 300 mm [5 weeks].

5. Northwestern North America, Eastern Siberia, and Kamchatka:

BITTER COLD DEVELOPS ACROSS REGION.

Temperatures plunged down to -56°C and wind chills dropped as low as -90°C in portions of Siberia as frigid Arctic air became entrenched across the region. Most stations recorded temperatures averaging 6°C to 12°C below normal during the past two weeks [2 weeks].

6. Central South America:

HOT WEATHER SUBSIDES BUT INTENSE RAINFALL PERSISTS.

Extremely heavy thunderstorms drenched the area for the second successive week as 80 mm to 250 mm fell across Uruguay, northeastern Argentina, central Paraguay, and eastern Bolivia, generating more widespread flooding [3 weeks]. Temperatures, however, returned to more normal levels as the stifling mid-summer heat wave diminished [Ended after 3 weeks].

7. Northern half of Europe:

MILD CONDITIONS ACCOMPANY HEAVY PRECIPITATION.

The northern half of Europe from the Benelux nations and Scandinavia eastward to the Urals recorded temperatures between 6°C and 15°C above normal [4 weeks] while a series of intense storms lashed the British Isles and Scandinavia. Wind gusts up to 130 kph accompanied rainfall totals of 70 mm to 250 mm [4 weeks].

8. Central and Southeastern Europe:

VERY DRY AGAIN.

Precipitation was very light from eastern France and southern West Germany eastward across southern Soviet Europe and southward through the Balkans. Portions of Austria and Hungary were moistened by 20 mm to 40 mm of rain while parts of eastern Yugoslavia and northern Greece reported 20 mm to 30 mm. Elsewhere, less than 10 mm fell [11 weeks].

9. Southeastern Africa and Madagascar:

MORE GENEROUS RAINFALL PROMOTES CROPS.

Ample rains continued dampening the region as much of Zambia, Zimbabwe, Mozambique, and Madagascar reported 70 mm to 150 mm. According to press reports, the unusually wet 1989-90 rainy season is expected to result in bumper corn and soybean crops [6 weeks].

10. Indonesia, Northern and Western Australia:

HEAVY RAINFALL BECOMES SCATTERED.

Isolated parts of southern Indonesia observed 70 mm to 150 mm of rain while much of southern Kiribati was deluged by nearly 300 mm. In contrast, most of New Guinea and much of Indonesia reported less than 60 mm as widespread heavy rainfall ceased [Ended after 4 weeks].

11. Northeastern Australia:

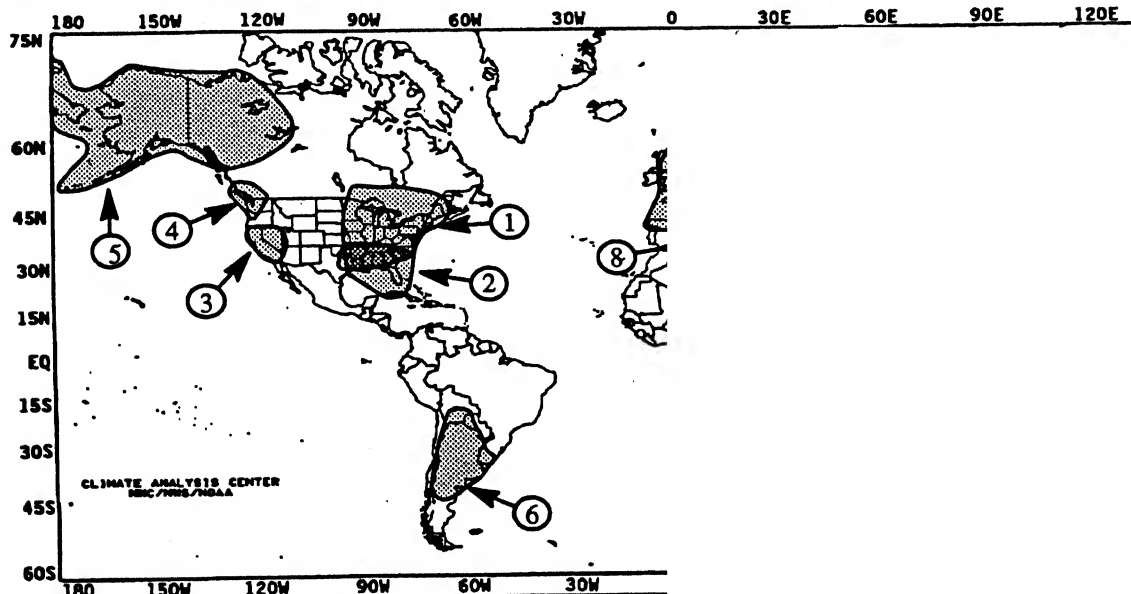
REGION TURNS COMPLETELY DRY.

No rainfall was reported throughout northeastern Queensland as the area's dryness intensified [8 weeks].

12. Southeastern Australia:

RAINFALL SLACKENS BUT REMAINS HEAVY.

Coastal locations in eastern New South Wales measured 80 mm to rain, which was much less than the previous week's deluge, but still high [2 weeks].



TEXT: Approximate duration of anomalies is in brackets. Precip
MAP: Approximate locations of major anomalies and episodic temperature anomalies, four week precipitation anomalies

UNITED STATES WEEKLY CLIMATE HIGHLIGHTS

FOR THE WEEK OF FEBRUARY 4 THROUGH FEBRUARY 10, 1990.

January's thaw continued into the middle of February as the eastern half of the country recorded unseasonably mild conditions for the sixth consecutive week. In addition, stormy weather battered both the Pacific Northwest and the Southeast for the second straight week. Several Pacific storm systems dumped more than 10 inches of rain on coastal sections of Oregon and Washington while violent thunderstorms preceding a cold front spawned large hail, damaging winds, torrential downpours, and several tornadoes from eastern Texas northeastward to the southern Atlantic Coast. Farther north, wintry conditions persisted across Alaska and northwestern Canada for the second successive week with weekly temperatures averaging up to 34°F below normal and readings down to -60°F. In Hawaii, slightly warmer and drier than normal weather prevailed across the islands.

As the week began, a series of low pressure centers moving northeastwards along a cold front produced scattered showers and a few strong thunderstorms in the Southeast and mid-Atlantic while moderate to heavy snows (up to a foot) whitened portions of New England. A cold front in the Far West rapidly advanced eastward towards the Rockies, and a storm system approached the Pacific Northwest. By early Tuesday, the system in the East was already off the coast while the cold front in the Far West had progressed into the nation's midsection, producing light rain showers in the Midwest and the South. Farther west, a rapidly moving storm system lashed coastal sections of Washington, Oregon, and northern California with torrential rains while heavy snows blanketed the Cascades and Sierra Nevadas.

During the middle of the week, the cold front in the central U.S. quickly trekked eastward and was off the Atlantic Coast by late Wednesday. The system in the Pacific Northwest rapidly tracked into the central Rockies, Plains, and upper Midwest by late Wednesday, generating heavy snows in sections of Utah and Wyoming. Strong winds blasted parts of the north-central Rockies and High Plains as gusts reached 75 mph. Additional heavy precipitation fell on the Pacific Northwest as yet another storm system headed into the region.

Towards the week's end, the system in the Rockies moved eastward, triggering numerous showers and thunderstorms in the lower Mississippi and Tennessee Valleys. During late Friday and early Saturday, severe weather broke out in the Southeast as a cold front raced across the region. Rainfall totals were relatively low due to the swift movement of the thunderstorms, but the intensity of the storms were great as they were responsible for 18 tornadoes and over 150 reports of high winds and damaging hail. Meanwhile, high pressure finally pushed into the Far West, bringing a temporary end

to the wet weather while a weak disturbance tracked southeastward out of Alberta into the northern Great Plains, dusting the area with light snow.

According to the River Forecast Centers, the greatest weekly precipitation fell along the Pacific Northwest Coast and in the northern Cascades as totals ranged between 4 and 12 inches. Farther east, widespread moderate to heavy precipitation (more than 2 inches) occurred in the lower Mississippi, Tennessee, and lower Ohio Valleys, the central Gulf Coast states, the southern and central Appalachians, and in northwestern and west-central Florida (see Table 1). Since January 1, 1990, most of these regions, as well as the south-central Plains and New England, have recorded surplus precipitation (see Figure 2).

Elsewhere, light to moderate amounts were observed along the central Alaskan and West Coasts, in portions of the northern and central Rockies, across the southern Great Plains, and throughout the nation east of the Mississippi River. Little or no precipitation fell on most of the Intermountain West, the southern Rockies, the northern half of the Plains, the upper Midwest, and across the western half of the Great Lakes.

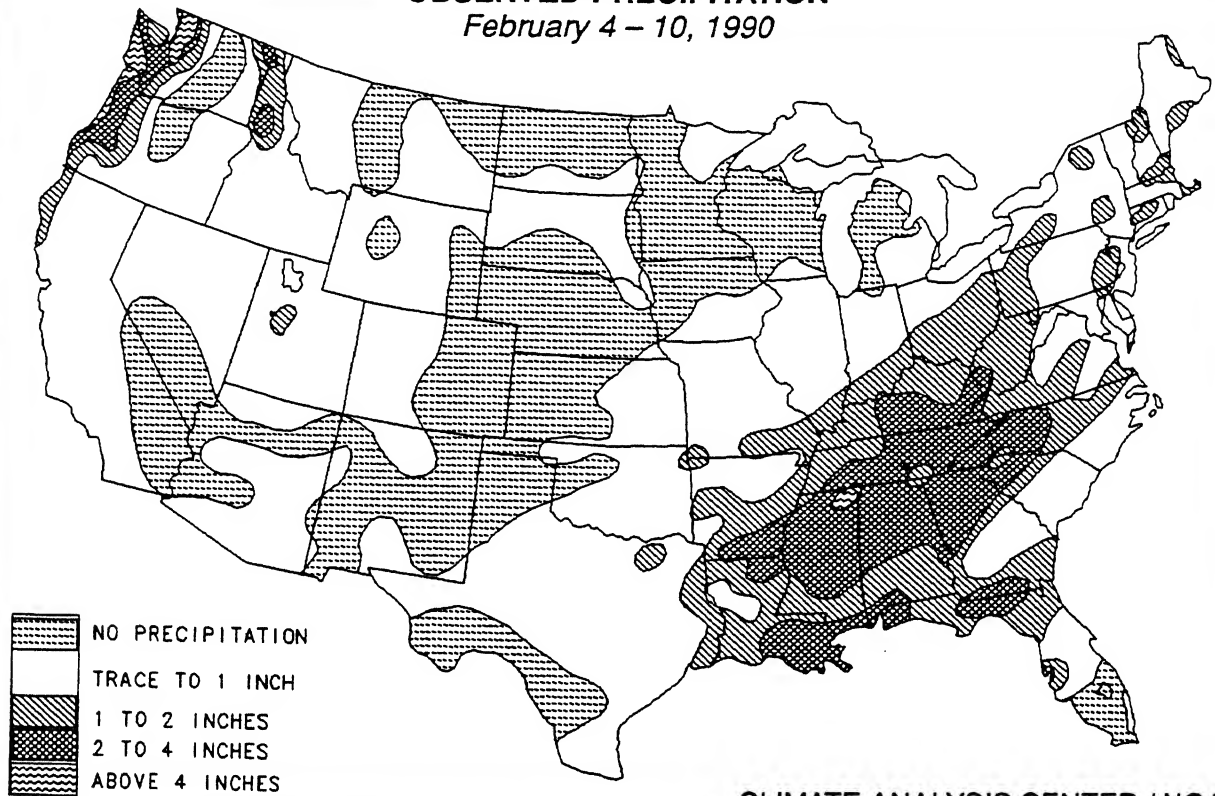
Much above normal temperatures returned to the extreme northern Rockies and Plains after last week's brief Arctic blast while the eastern half of the U.S. experienced the sixth straight week of unseasonably mild conditions. Since the start of the year, temperatures in the lower 48 states, with the exception of the Southwest, have averaged up to 17°F above normal (see Figure 3). This week, the greatest positive departures (between +15°F and +20°F) occurred in the northern Plains and middle Mississippi Valley (see Table 2). Except for the Southwest and along the Pacific Coast, above normal temperatures were observed in the remainder of the country. Dozens of daily maximum temperature records were broken during the week in the eastern half of the nation as highs in the sixties were common as far north as central New England and the northern Great Plains (see Figure 1). Southern and central Texas, most of Florida, and parts of the southern Atlantic Coast states reported readings in the eighties while nineties were observed in extreme southern Texas.

For the second consecutive week, bitterly cold Arctic air dominated most of Alaska (see Table 3, Figure 4). Readings below -40°F were common across the interior of the state, and weekly temperatures at several stations averaged more than 20°F below normal. In the contiguous U.S., the largest departures (between -5°F and -7°F) were found in the Great Basin and the desert Southwest. Subzero readings were confined to the central Rockies, the eastern Great Basin, and parts of the upper Midwest and northern New England.

TABLE 1. Selected stations with 2.50 or more inches of precipitation for the week.

STATION	TOTAL (INCHES)	STATION	TOTAL (INCHES)
QUILLAYUTE, WA	10.13	MUSCLE SHOALS, AL	3.37
ASTORIA, OR	7.47	NEW ORLEANS NAS, LA	3.22
ATLANTA, GA	4.98	HICKORY, NC	2.81
HOQUIAM, WA	4.75	MOBILE, AL	2.77
OLYMPIA, WA	4.43	MERIDIAN, MS	2.72
BELLINGHAM, WA	3.92	TAMPA/MAC DILL AFB, FL	2.69
NORTH BEND, OR	3.89	EUGENE, OR	2.66
TACOMA/FT LEWIS/GRAY AAF, WA	3.86	LAFAYETTE, LA	2.63
TACOMA/MCCHORD AFB, WA	3.81	TAMPA, FL	2.56
TUPELO, MS	3.67	ASHEVILLE, NC	2.53
VALDOSTA, GA	3.61	NEW ORLEANS/MOISANT, LA	2.50

OBSERVED PRECIPITATION *February 4 – 10, 1990*



CLIMATE ANALYSIS CENTER / NOAA

DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F) *February 4 – 10, 1990*

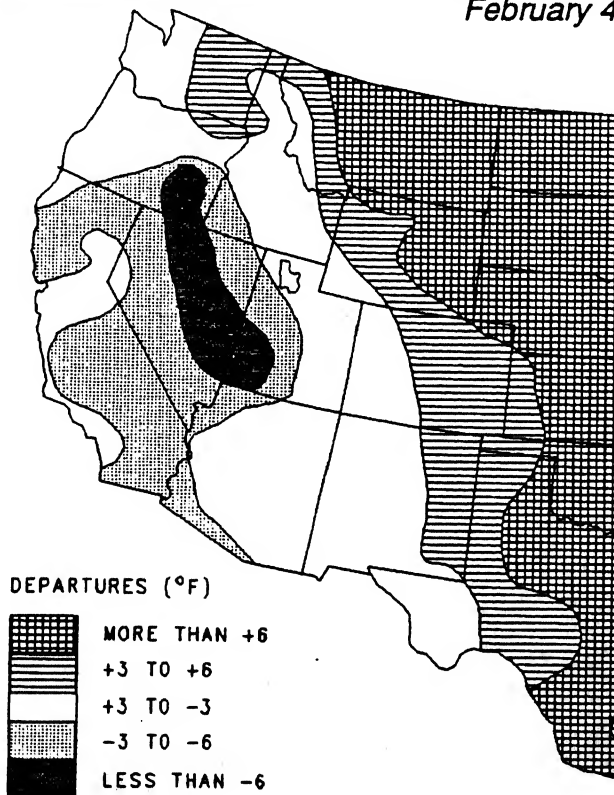


TABLE 2. Selected stations with temperatures averaging 15.0°F or more ABOVE normal for the week.

STATION	DEPARTURE (°F)	AVERAGE (°F)	STATION	DEPARTURE (°F)	AVERAGE (°F)
DEVIL'S LAKE, ND	+20.8	26.1	OTTUMWA, IA	+16.1	39.6
JAMESTOWN, ND	+20.1	29.9	DES MOINES, IA	+15.9	38.2
GRAND FORKS, ND	+19.1	25.4	MINNEAPOLIS, MN	+15.9	30.7
FARGO, ND	+18.4	26.8	WATERTOWN, SD	+15.9	28.1
MINOT, ND	+18.2	29.2	SIOUX FALLS, SD	+15.8	32.3
ALEXANDRIA, MN	+17.7	27.1	BURLINGTON, IA	+15.6	41.4
BISMARCK, ND	+17.2	29.0	MOLINE, IL	+15.4	38.4
HURON, SD	+16.9	32.5	PIERRE, SD	+15.4	34.6
ABERDEEN, SD	+16.9	29.4	PEORIA, IL	+15.2	39.8
QUINCY, IL	+16.3	42.9	SPENCER, IA	+15.1	31.7
CHICAGO/O'HARE, IL	+16.2	38.8	ST. CLOUD, MN	+15.1	26.1

TABLE 3. Selected stations with temperatures averaging 7.0°F or more BELOW normal for the week.

STATION	DEPARTURE (°F)	AVERAGE (°F)	STATION	DEPARTURE (°F)	AVERAGE (°F)
BETTLES, AK	-34.3	-41.3	GULKANA, AK	-22.4	-22.4
KING SALMON, AK	-32.9	-18.9	ANCHORAGE, AK	-22.1	-5.6
BETHEL, AK	-32.1	-26.7	NORTHWAY, AK	-20.3	-33.8
FORT YUKON, AK	-29.9	-47.9	CORDOVA/MILE 13, AK	-18.6	7.1
ILIAMNA, AK	-29.6	-12.6	HOMER, AK	-18.2	5.7
TALKEETNA, AK	-29.5	-16.1	KODIAK, AK	-14.0	16.6
KOTZEBUE, AK	-29.5	-34.1	VALDEZ, AK	-12.9	8.1
NOME, AK	-28.8	-25.1	BARTER ISLAND, AK	-12.4	-32.1
FAIRBANKS, AK	-26.4	-33.0	YAKUTAT, AK	-7.3	19.9
BIG DELTA, AK	-25.9	-26.0	CEDAR CITY, UT	-7.0	25.7
KENAI, AK	-25.6	-10.8	CALIENTE, NV	-7.0	30.1
UNALAKLEET, AK	-24.3	-21.6			

EXTREME MAXIMUM TEMPERATURE (°F)
February 4 – 10, 1990

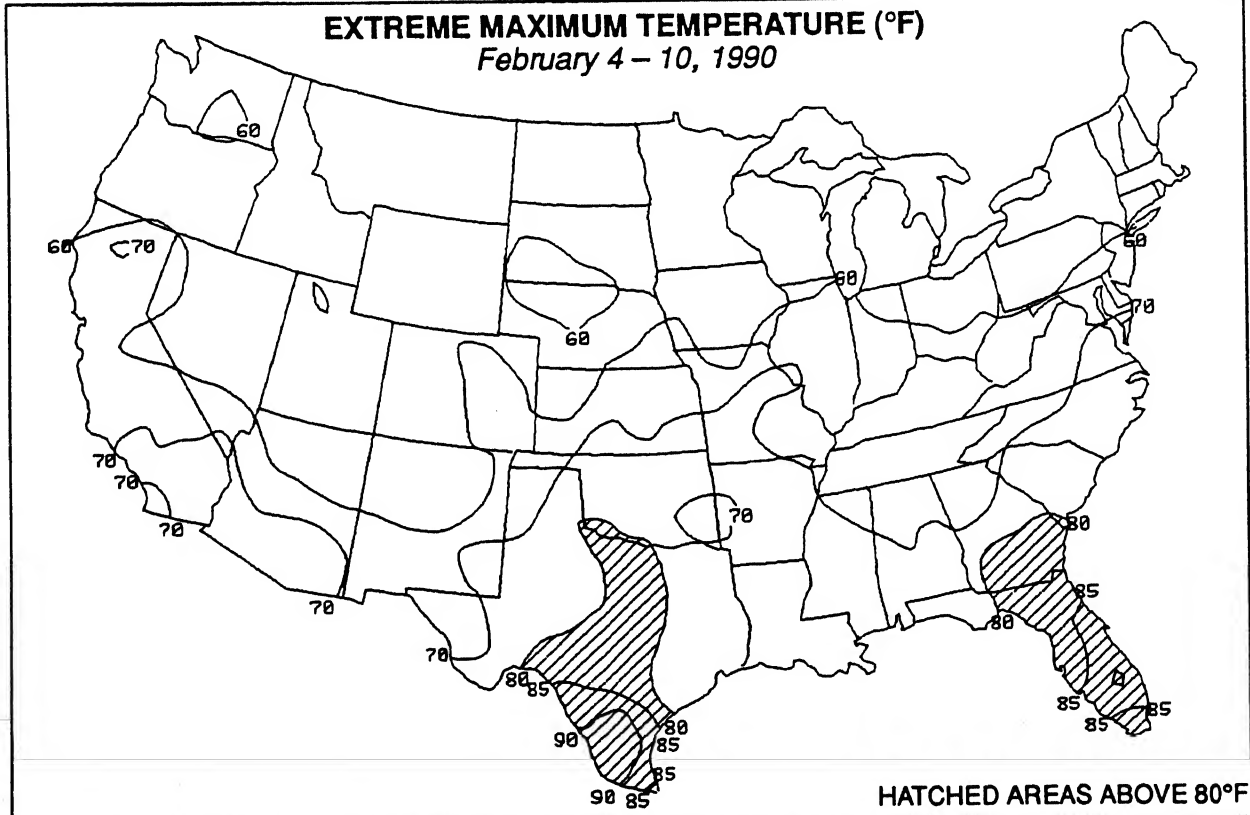
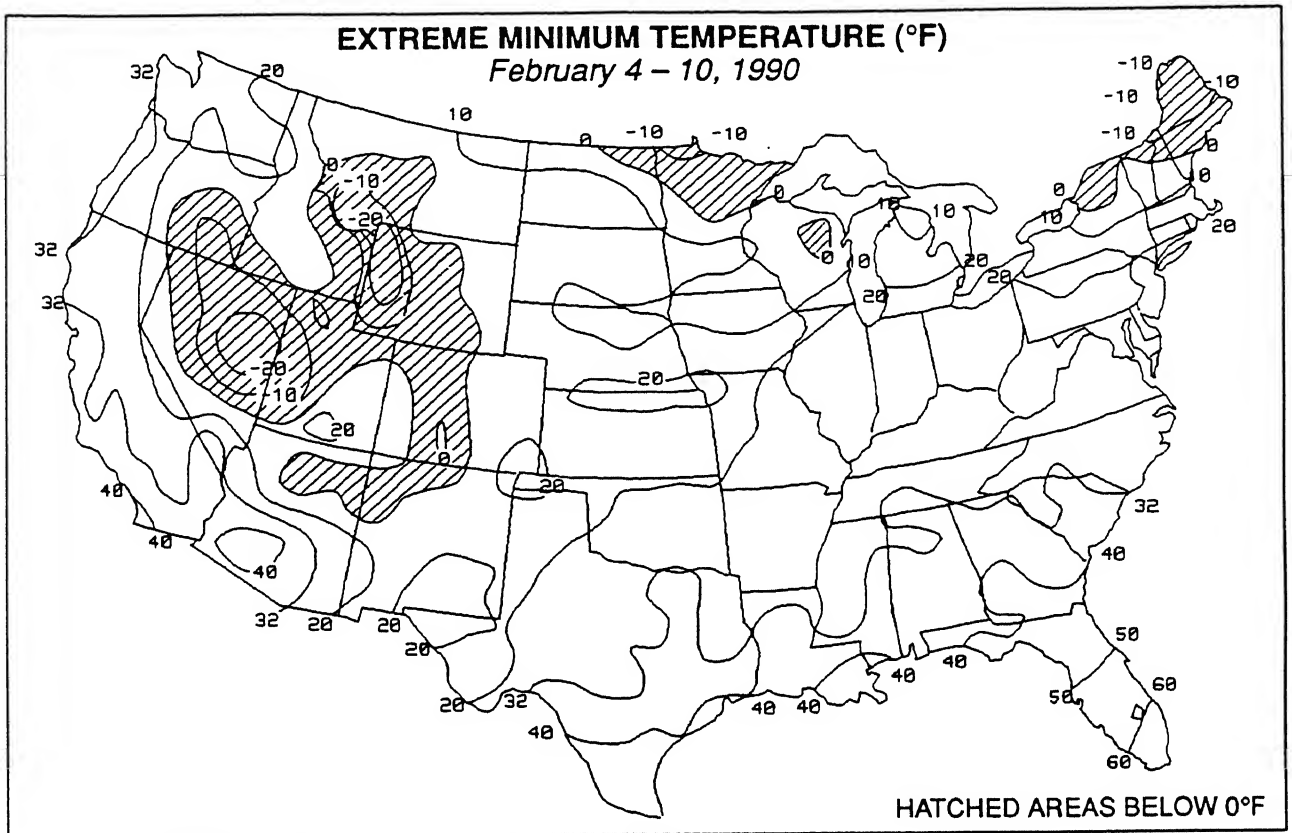
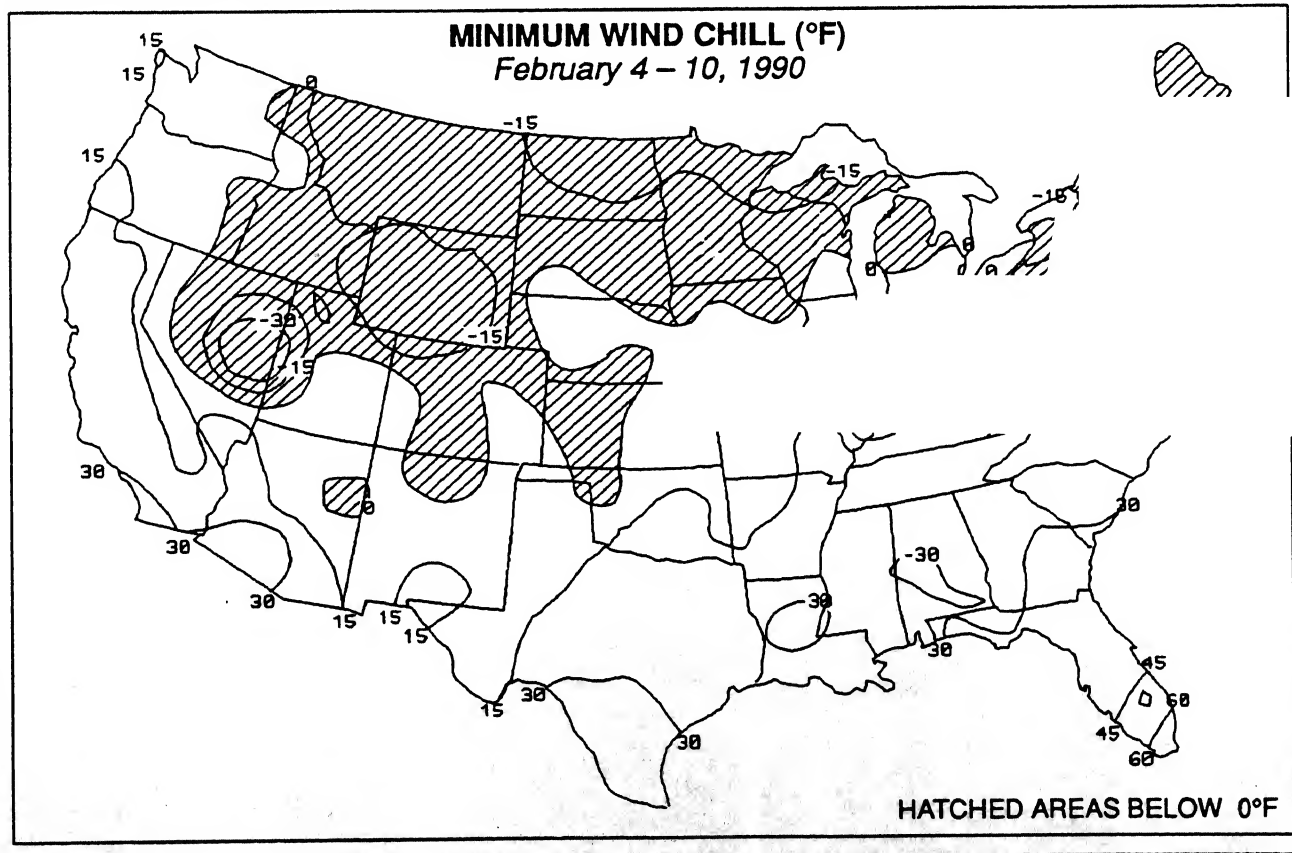


Figure 1. Extreme maximum temperatures (°F) during the week of February 4-10, 1990. Isotherms are only drawn for 60°F, 70°F, 80°F, 85°F, and 90°F, and shaded areas are more than 80°F. Unseasonably mild conditions persisted into the sixth straight week across the eastern half of the country as dozens of daily maximum temperature records were set during the week. Highs topped 60°F as far north as Chicago and Boston while readings in the nineties sizzled portions of extreme southern Texas.

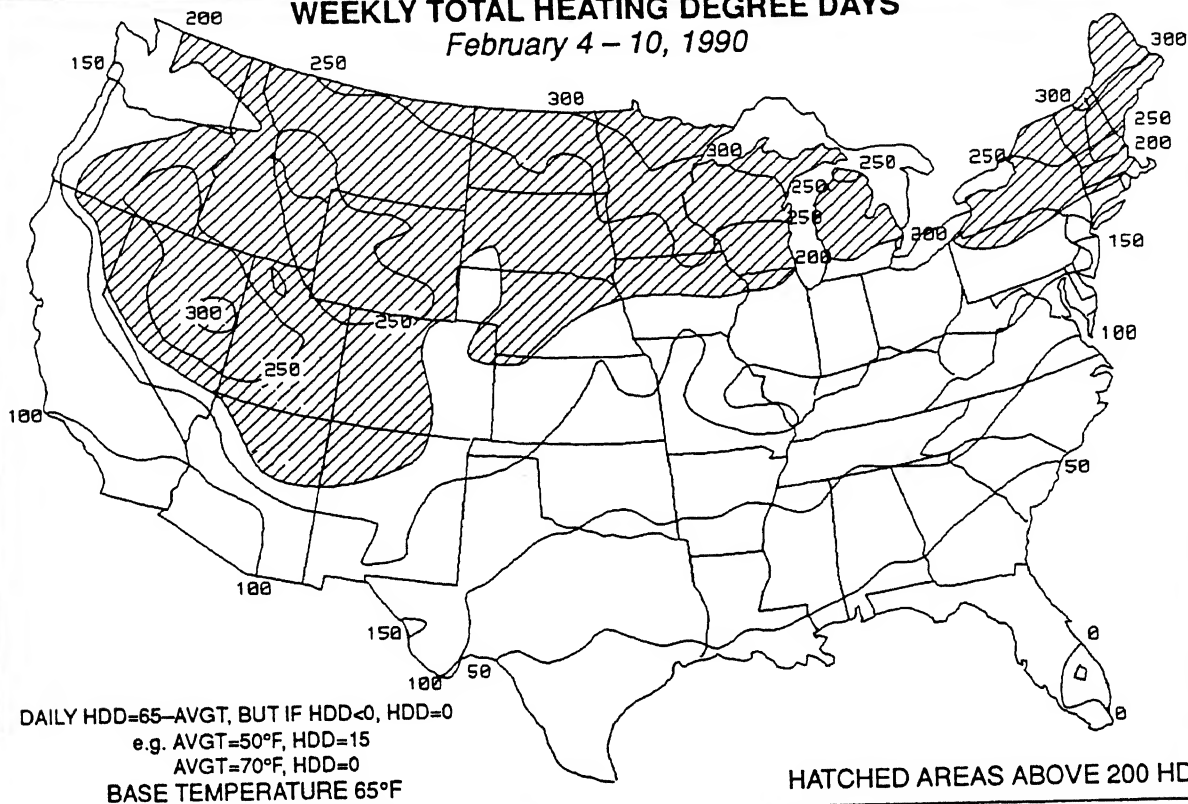


A lack of wintry conditions in the lower 48 states kept temperatures at most locations above 0°F with the exception of the Great Basin, central Rockies, and the normally cold upper Midwest and northern New England (top). Similarly, the general absence of cold air and strong winds confined dangerous wind chills (less than -15°F) to the aforementioned regions (bottom).



WEEKLY TOTAL HEATING DEGREE DAYS

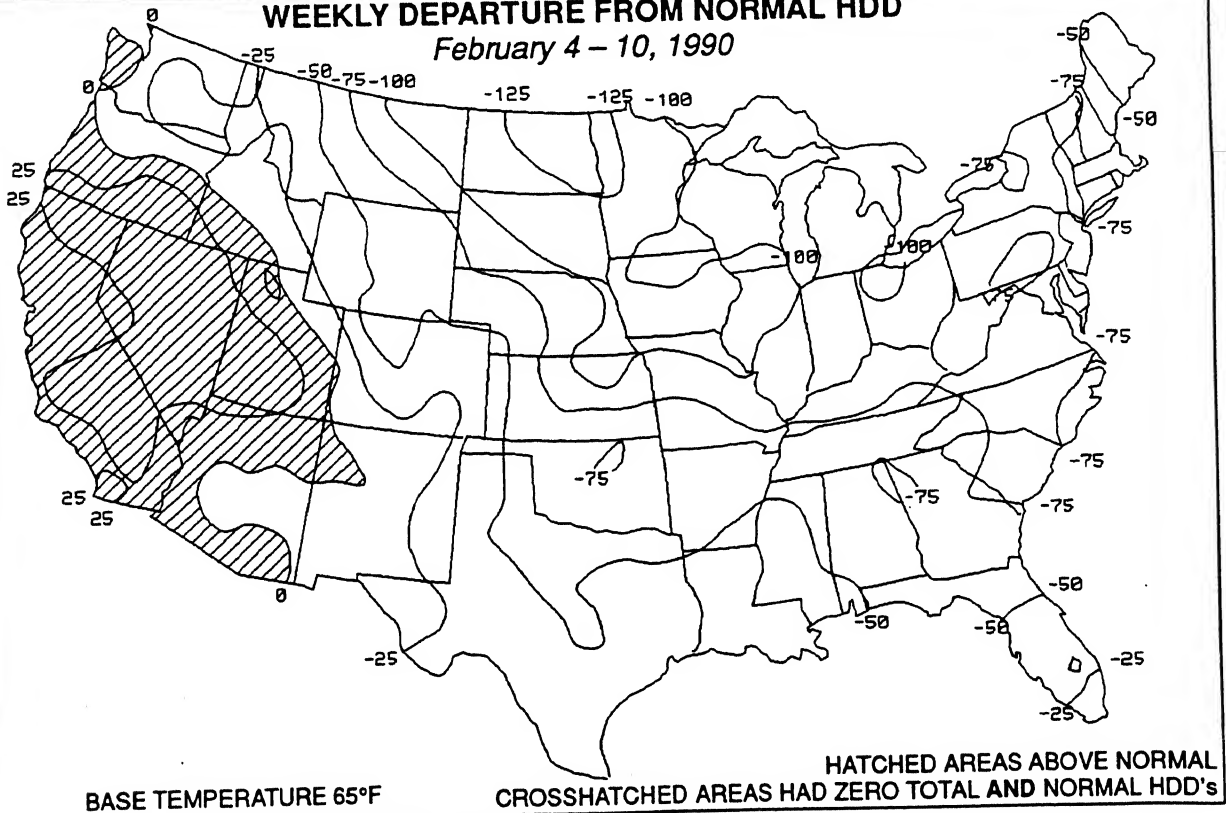
February 4 - 10, 1990



Unseasonably mild weather continued for the sixth consecutive week across much of the nation east of the Rockies. As a result, weekly heating totals were well below normal, with the greatest amounts (more than 300 HDDs) located in the upper Midwest, extreme northern New England, and parts of the Great Basin (top). Slightly greater than usual weekly heating demand was confined to the Southwest for the fourth successive week as temperatures averaged up to 7°F below normal. In sharp contrast, the remainder of the U. S. experienced a significant reduction in the normal heating demand (bottom).

WEEKLY DEPARTURE FROM NORMAL HDD

February 4 - 10, 1990



U.S. REGIONAL CLIMATE CENTER UPDATE

Western Regional Climate Center

With the recent bout of Pacific storm systems, the mountain snow water content increased by 8–10 percentage points in the Pacific Northwest (Idaho, Oregon, Washington), and by a few points in other states in the northern half of the West during the past week (see Tables 4 and 5). An example of the storms impacts are given by the snow cover at Crater Lake, OR. On January 22, Crater Lake measured only 18 inches of snow cover. 51 inches fell from Jan. 26–31, and another 50 inches occurred from Feb. 1–8. On Feb. 8, the snow depth increased to 75 inches; however, the snow depth at the end of January is normally 116 inches.

In the southern portion of the West, the percent of normal snow water content remained the same or fell slightly. Arizona and New Mexico are just over half of normal, and the Rio Grande and Colorado river basins are 40% and 60% of normal, respectively.

Despite recent precipitation events, much of the West faces possible water shortages this summer. California may see the fourth consecutive year of runoff volume in the critical category for dryness. The state will make a decision on February 15 to decide whether to declare a deficiency for the central valley project. Such a decision will result in a 25% curtailment to municipal and industrial users and a 50% reduction to agricultural users for the remainder of the spring and summer. Even with average precipitation during the remainder of the winter and through the spring, the carryover reservoir storage capacity for the next year will only be 3.8 million acre–feet, the lowest in the last 4 years and close to the carryover capacity level during the severe drought of 1976.

Midwest Climate Center

After record cold afflicted much of the Midwest during December 1989, January's temperatures moved to the opposite end of the climate spectrum. No comparable shift between such an extremely cold December to an unusually mild January has occurred in the Midwest since climate records began in the 1880s. On a state-wide basis, January 1990 temperatures were ranked the warmest this century in Wisconsin, the second warmest in Illinois, Iowa, Minnesota, and Missouri, the third warmest in Michigan, the fourth warmest in Indiana, and the seventh warmest in Kentucky.

January was somewhat wetter than December, but precipitation was still below normal. The precipitation pattern over the Midwest was quite variable, but generally 60% to 90% of normal. Minnesota experienced the driest conditions in the Midwest as January 1990 was the eighth driest January on record this century. A few areas recorded above normal January precipitation, namely Missouri, southwestern Iowa, and northeastern Wisconsin. Snow cover, an important ingredient in spring runoff in rivers of the upper Midwest, was only 30–60% of normal across Minnesota, Wisconsin, and upper Michigan.

The greatest impact of January's mild and dry weather was major reductions in expenditures for heating. The exact amount of savings to consumers across the Midwest is unknown, but is estimated to be at least \$100 million. The subnormal January precipitation aggravated drought conditions in the western and northwestern parts of the Corn Belt. Deficient precipitation during the past 5 months have worsened hydrologic drought (streamflow and ground water) that will extend well into 1990.

Table 4.		Percent of Normal							
		From Oct. 1, 1989–Date listed below							
		Snow Water Content				Precipitation			
State	Feb12	Feb6	Jan22	Jan9	Feb12	Feb6	Jan22	Jan9	
Arizona	54	55	41	42	48	49	44	41	
California (Great Basin area only)	47	43	43	39	55	57	53	47	
Colorado	60	60	58	67	72	72	68	67	
Idaho	80	72	54	60	85	81	73	77	
Montana	103	99	87	91	120	118	111	119	
Nevada	65	63	57	52	61	61	59	67	
New Mexico	51	53	46	39	70	72	65	65	
Oregon	80	70	31	34	82	77	63	66	
Utah	62	59	56	48	65	63	62	56	
Washington	106	96	55	54	110	102	87	88	
Wyoming	90	87	83	90	96	94	89	105	
West Region (except rest of California)	79	74	58	60	86	83	75	77	
WESTERN REGIONAL CLIMATE CENTER and the SOIL CONSERVATION SERVICE									

Table 5.

Percent of Normal

From Oct. 1, 1989–Date listed below

River Basin	Snow Water Content				Precipitation			
	Feb12	Feb6	Jan22	Jan9	Feb12	Feb6	Jan22	Jan9
Arkansas River	79	81	77	76	79	82	82	78
Colorado River	62	61	57	54	68	67	64	61
Missouri River	99	96	92	100	110	109	104	116
Columbia River	89	81	53	56	93	88	76	80
Rio Grande River	42	42	39	27	63	64	60	56
Great Basin	57	55	51	45	61	60	58	52

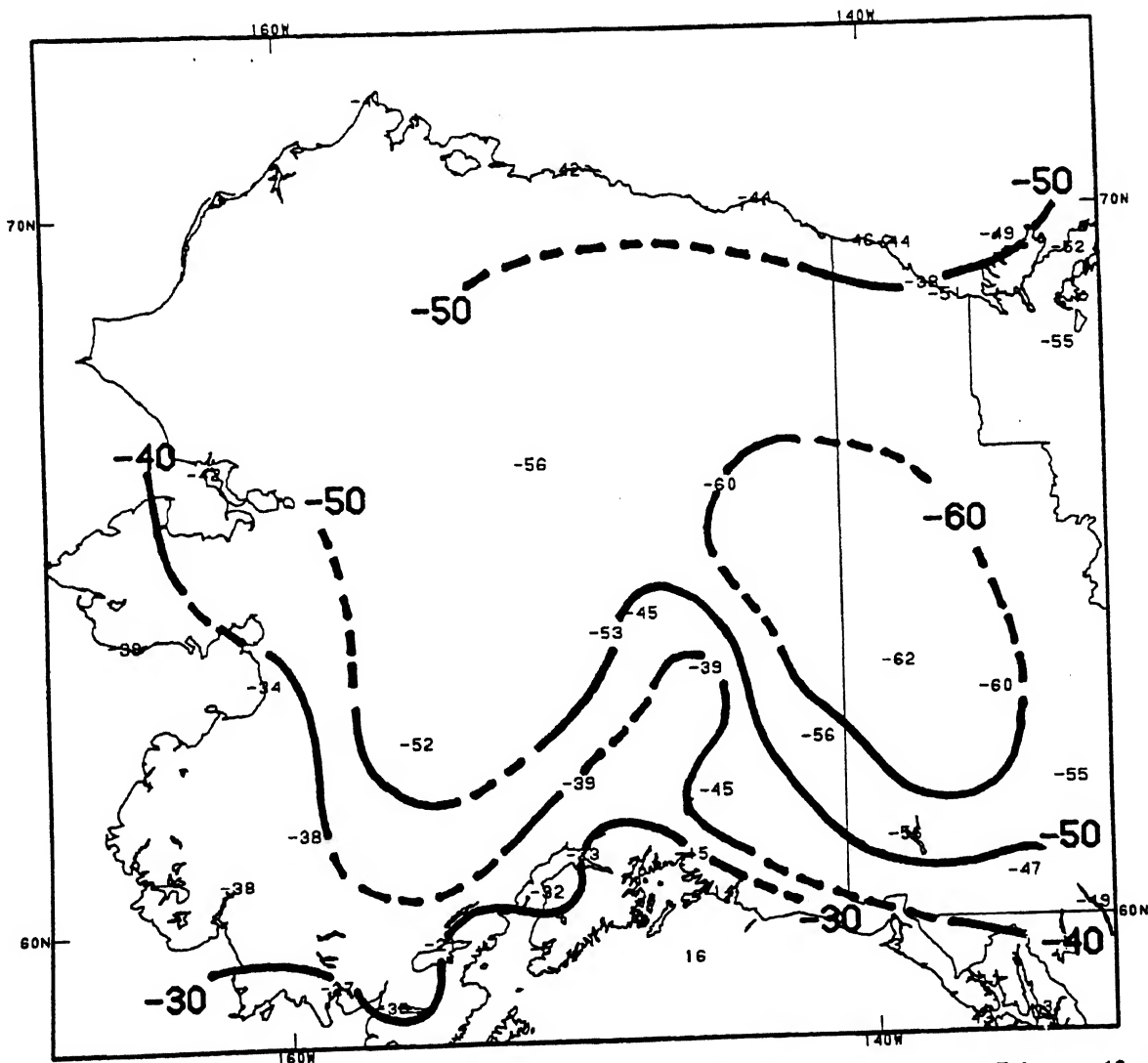
WESTERN REGIONAL CLIMATE CENTER
and the SOIL CONSERVATION SERVICE

Figure 2. Extreme minimum temperatures ($^{\circ}\text{F}$) during the two-week period of January 28–February 10, 1990. Isotherms are only drawn for every 10°F starting at -30°F and ending at -60°F . While most of the lower 48 states has experienced spring-like mildness since January, bitterly cold Arctic air has invaded Alaska during the past two weeks. Readings have plunged under -50°F in the interior of the state and the Canadian Yukon, and two-week temperatures have averaged more than 20°F below normal in the previously mentioned areas (not shown). Gusty winds and the extremely low temperatures have produced wind chills near -100°F along the northern coast and between -65°F and -85°F farther south in the region's interior (not shown).

PERCENT OF NORMAL PRECIPITATION

JANUARY 1 - FEBRUARY 10, 1990

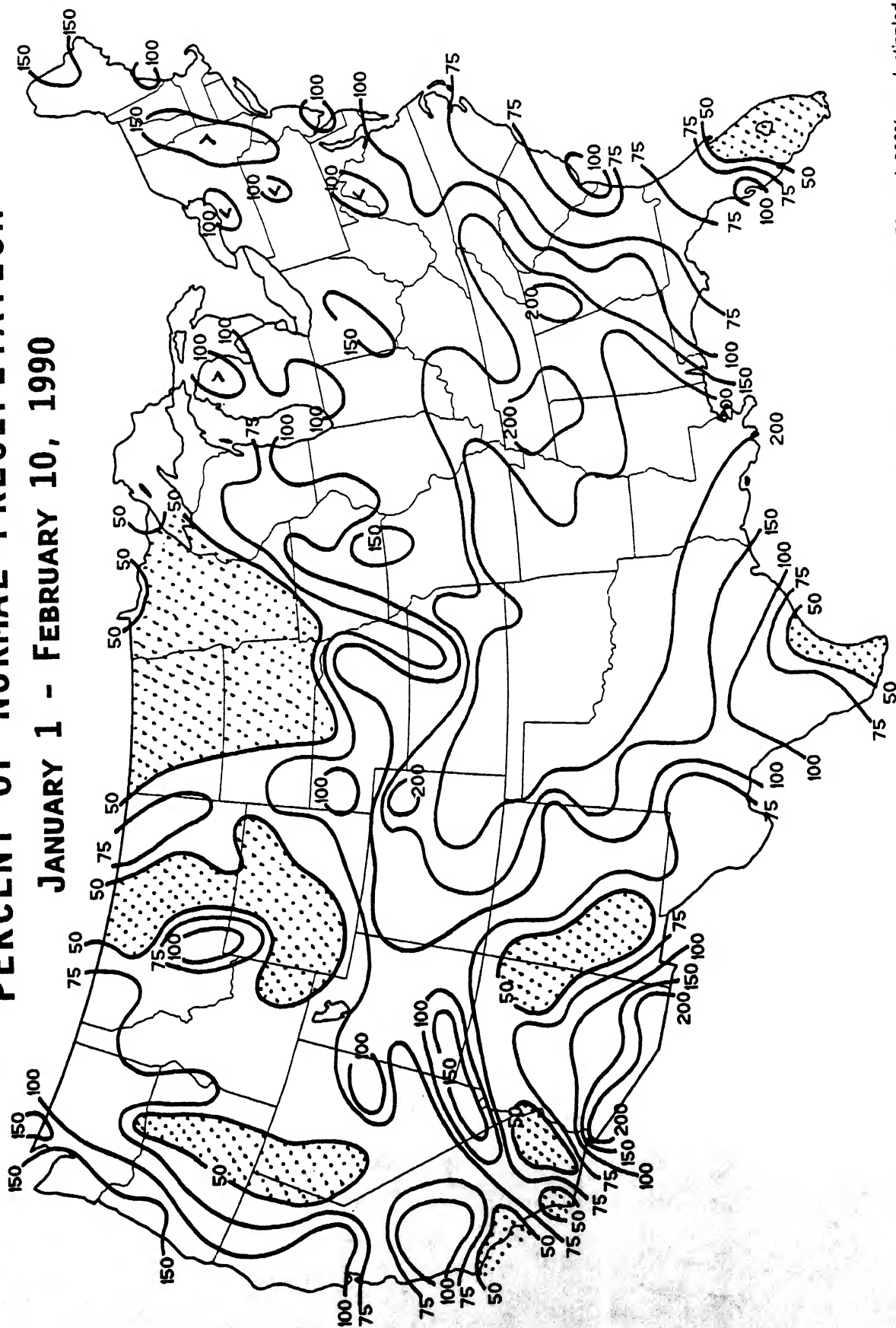


Figure 3. Percent of normal precipitation during January 1-February 10, 1990. Isopleths are only drawn for 50, 75, 100, 150, and 200%, and stippled areas are less than 50%. Since the start of 1990, heavy precipitation has drenched the south-central Great Plains, the lower Mississippi and Tennessee Valleys, the central Gulf Coast states, and along the Pacific Northwest Coast. Much above normal precipitation has also fallen across the central High Plains, southern Arizona, and most of the Northeast, although amounts are generally smaller than the aforementioned regions. In contrast, under half the normal precipitation occurred in parts of the Intermountain West, southern California, the southern Rockies, the northern Plains and upper Midwest, and in southern Texas and Florida. With the exception of the Pacific Northwest, areas that experienced either long-term dryness or wetness at the end of 1989 have generally remained the same so far this year as ample precipitation has fallen on the already-moist South and East while heavy precipitation continued to miss most of the north-central states, the southern sections of the West, and southern Florida and Texas.

JANUARY 1 - FEBRUARY 10, 1990

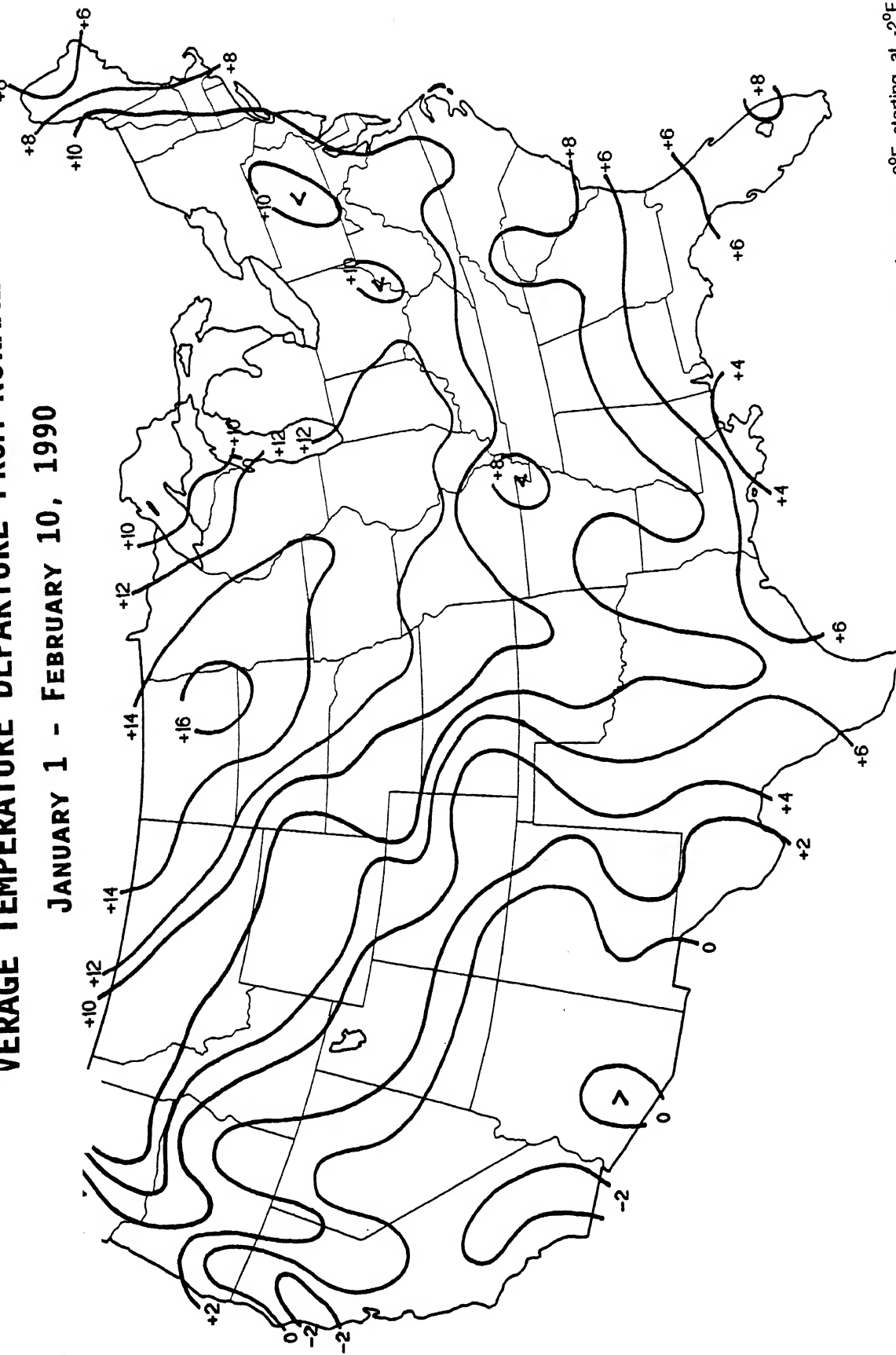
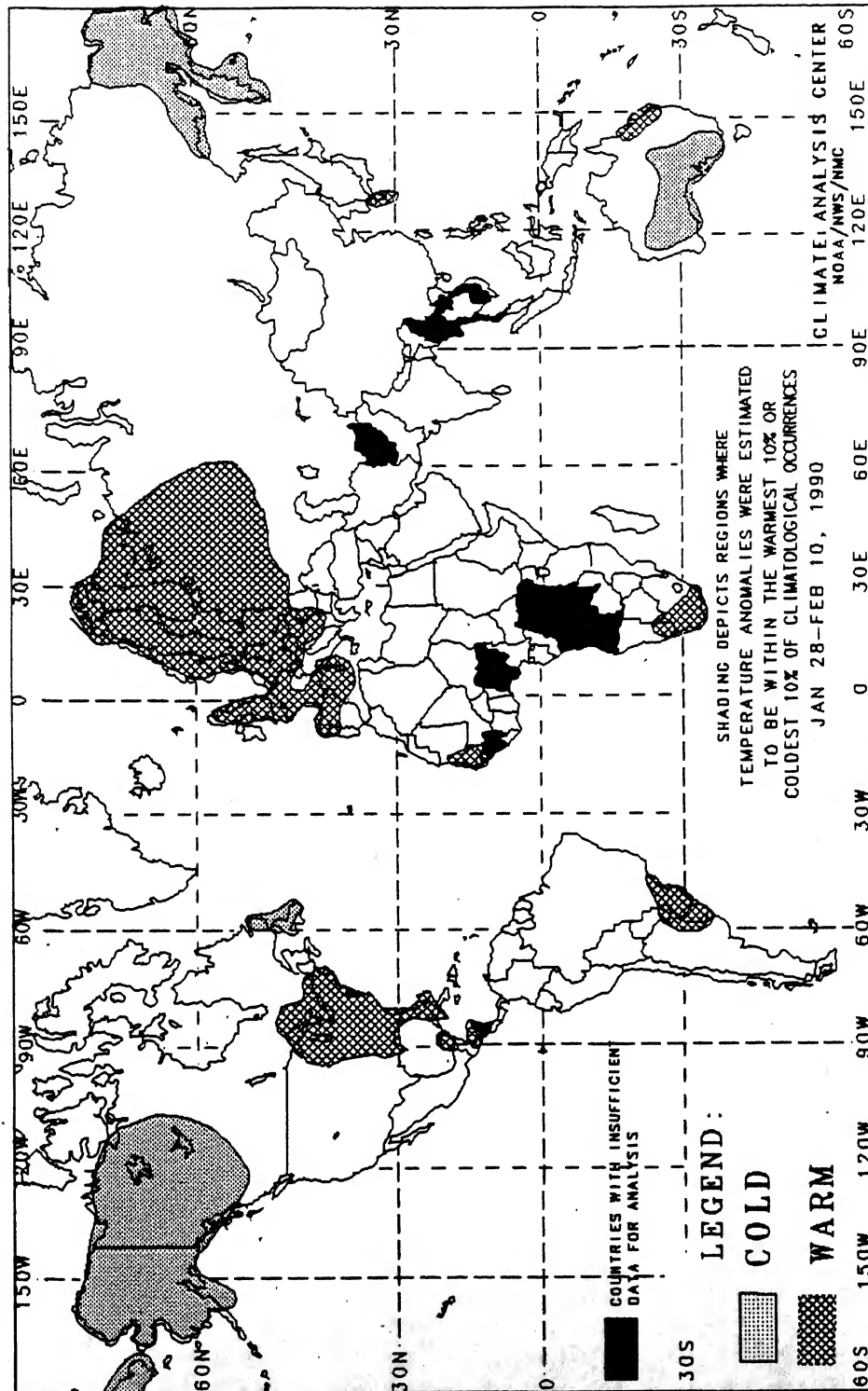


Figure 4. Average temperature departure from normal (°F) during January 1-February 10, 1990. Isotherms are drawn for every 2°F starting at -2°F and ending at +16°F. After December's near-record cold in the eastern half of the nation, unseasonably mild conditions have persisted throughout the lower 48 states with the exception of the Southwest which was slightly colder than normal. Departures exceeding +10°F were common across the north-central and northeastern U.S. January to early February is the normally the coldest time of the year, but numerous daily and monthly maximum temperature records have been established instead.

GLOBAL TEMPERATURE ANOMALIES

2 WEEKS



The anomalies on this chart are based on approximately 2500 observing stations for which at least 13 days of temperature observations were received from synoptic reports. Many stations do not operate on a twenty-four hour basis so many night time observations are not taken. As a result of these missing observations the estimated minimum temperature may have a warm bias. This in turn may have resulted in an overestimation of the extent of some warm anomalies.

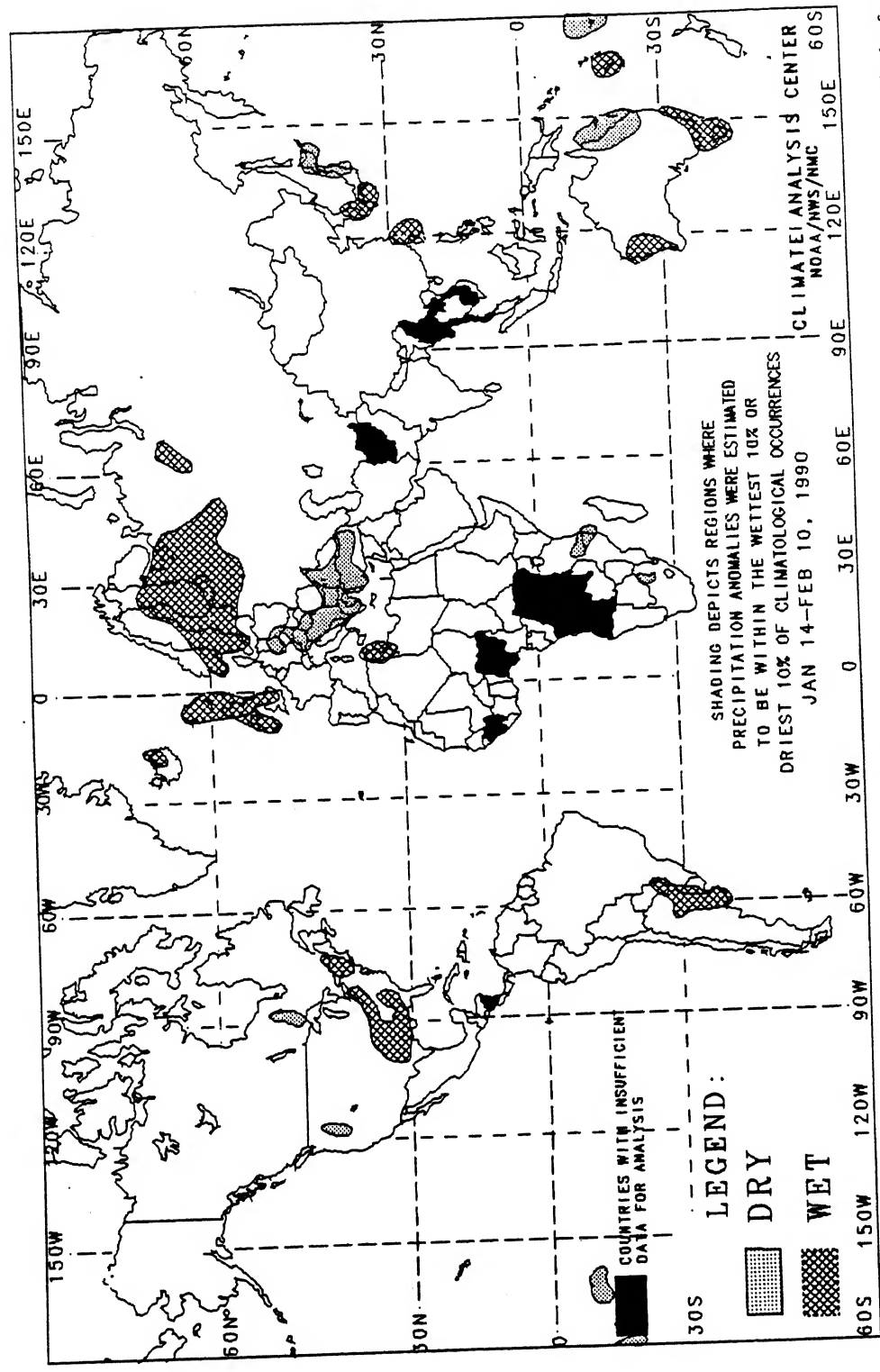
Temperature anomalies are not depicted unless the magnitude of temperature departures from normal exceeds 1.5°C.

In some regions, insufficient data exist to determine the magnitude of anomalies. These regions are located in parts of tropical Africa, southwestern Asia, interior equatorial South America, and along the Arctic Coast. Either current data are too sparse or incomplete for analysis, or historical data are insufficient for determining percentiles, or both. No attempt has been made to estimate the magnitude of anomalies in such regions.

This chart shows general areas of two week temperature anomalies. Caution must be used in relating it to local conditions, especially in mountainous regions.

GLOBAL PRECIPITATION ANOMALIES

4 WEEKS



In some regions, insufficient data exist to determine the magnitude of anomalies. These regions are located in parts of tropical Africa, southwestern Asia, interior equatorial South America, and along the Arctic Coast. Either current data are too sparse or incomplete for analysis, or historical data are insufficient for determining percentiles, or both. No attempt has been made to estimate the magnitude of anomalies in such regions.

The chart shows general areas of four week precipitation anomalies. Caution must be used in relating it to local conditions, especially in mountainous regions.

The anomalies on this chart are based on approximately 2500 observing stations for which at least 27 days of precipitation observations (including zero amounts) were received or estimated from synoptic reports. As a result of both missing observations and the use of estimates from synoptic reports (which are conservative), a dry bias in the total precipitation amount may exist for some stations used in this analysis. This in turn may have resulted in an overestimation of the extent of some dry anomalies.

In climatologically arid regions where normal precipitation for the four week period is less than 20 mm, dry anomalies are not depicted. Additionally, wet anomalies for such arid regions are not depicted unless the total four week precipitation exceeds 50 mm.

